

CLAIMS:

1. A power transmission fluid composition comprising:
 - (a) a base oil and
 - (b) an additive composition comprising
 - (i) a borated dispersant, wherein the borated dispersant includes up to 1 wt% of boron;
 - (ii) a succinimide prepared from an alkenyl succinic acid or anhydride and ammonia;
 - (iii) a phosphorus-containing antiwear component comprising an organic ester of phosphoric acid, phosphorous acid, or an amine salt thereof.
2. The fluid of claim 1, wherein the base oil comprises a natural lubricating oil, a mixture of natural lubricating oils, a synthetic oil, a mixture of synthetic oils, or a mixture of natural and synthetic oils.
3. The fluid of claim 2, wherein the natural lubricating oil or mixture of natural lubricating oils comprises a mineral oil, a vegetable oil, or a mixture thereof.
4. The fluid of claim 2, wherein the synthetic oil or mixture of synthetic oils comprises an oligomer of an alphaolefin, an ester, an oil derived from a Fischer-Tropsch process, a gas-to-liquid stock, or a mixture thereof.
5. The fluid of claim 1, wherein the base oil comprises a kinematic viscosity of from about 2 cSt to about 10 cSt at 100 °C.
7. The fluid of claim 1, wherein the borated dispersant is free of phosphorus.
8. The fluid of claim 1, wherein the borated dispersant comprises about 0.1 wt% to about 0.7 wt% of boron.

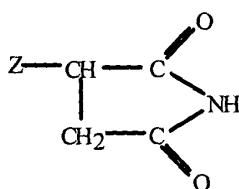
9. The fluid of claim 1, wherein the borated dispersant comprises about 0.25 wt% to about 0.7 wt% of boron.
10. The fluid of claim 1, wherein the borated dispersant comprises one or more of a succinimide, a Mannich base, and a polyalkylene amine.
11. The fluid of claim 1, wherein the borated dispersant comprises one or more of a bis-succinimide.
12. The fluid of claim 1, wherein the borated dispersant comprises the reaction product of a polyalkenyl succinic anhydride and a polyalkylene polyamine.
13. The fluid of claim 12, wherein the polyalkylene polyamine comprises a tetraethylene pentamine.
14. The fluid of claim 12, wherein the molar ratio of polyalkenyl succinic anhydride to polyalkylene polyamine is about 1:1 to about 2.4:1.
15. The fluid of claim 14, wherein the molar ratio of polyalkenyl succinic anhydride to polyalkylene polyamine is about 2.4 to about 1.
16. The fluid of claim 1, wherein the borated dispersant comprises the reaction product of a polyalkenyl phenol, an aldehyde, and a polyalkylene polyamine.
17. The fluid of claim 16, wherein the polyalkenyl phenol comprises a long chain hydrocarbon-substituted phenol and the aldehyde comprises formaldehyde and wherein the reaction product is formed by condensing about one molar proportion of the long chain hydrocarbon-substituted phenol with from about 1 to about 2.5 moles of formaldehyde and from about 0.5 to about 2 moles of polyalkylene polyamine.
18. The fluid of claim 1, wherein the borated dispersant has at least one polyalkylene moiety having a molecular weight of from about 900 amu to about 3000 amu.

19. The fluid of claim 18, wherein the at least one polyalkylene moiety has a molecular weight of from about 1300 amu to about 2100 amu.
20. The fluid of claim 19, wherein the at least one polyalkylene moiety has a molecular weight of about 2100 amu.
21. The fluid of claim 1, wherein the borated dispersant has at least two polyalkylene moieties, wherein each polyalkylene moiety has a molecular weight of from about 900 amu to about 3000 amu.
22. The fluid of claim 1, wherein the borated dispersant is reacted with an organic acid, an anhydride, and/or an aldehyde/phenol mixture.
23. The fluid of claim 1, wherein the fluid comprises about 1 wt% to about 5 wt% of the borated dispersant.
24. The fluid of claim 1, wherein the fluid comprises about 1.25 wt% to about 2.5 wt% of the borated dispersant.
25. The fluid of claim 1, wherein the fluid comprises about 50 to about 250 ppm by weight of boron.
26. The fluid of claim 1, wherein the borated dispersant comprises a mixture of borated dispersants.
27. The fluid of claim 1, wherein the succinimide comprises the reaction product of a succinic anhydride and ammonia.
28. The fluid of claim 1, wherein the succinimide comprises an alkenyl group having about 12 to about 36 carbon atoms.

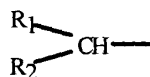
29. The fluid of claim 1, wherein the succinimide comprises an alkenyl group having about 16 to about 28 carbon atoms.

30. The fluid of claim 1, wherein the succinimide comprises an alkenyl group having about 18 to about 24 carbon atoms.

31. The fluid of claim 1, wherein the succinimide comprises one or more of a compound having the following structure:



wherein Z has the structure:



wherein either R₁ or R₂ may be hydrogen, but not both, and wherein R₁ and/or R₂ may be independently straight or branched chain hydrocarbon groups containing from about 1 to about 34 carbon atoms such that the total number of carbon atoms in R₁ and R₂ is from about 11 to about 35; and

wherein, in addition to or in the alternative, the parent succinic anhydride may be formed by reacting maleic acid, anhydride, or ester with an internal olefin containing about 12 to about 36 carbon atoms, said internal olefin being formed by isomerizing the olefinic double bond of a linear α -olefin or mixture thereof to obtain a mixture of internal olefins.

32. The fluid of claim 1, wherein the fluid comprises a friction-modifying amount of the succinimide.

33. The fluid of claim 1, wherein the fluid comprises about 0.2 wt% to about 1.0 wt% of the succinimide.
34. The fluid of claim 33, wherein the fluid comprises about 0.2 wt% to about 0.6 wt% of the succinimide.
35. The fluid of claim 34, wherein the fluid comprises about 0.4 wt% of the succinimide.
36. The fluid of claim 1, wherein the fluid is free of any other non-metallic friction modifier other than the succinimide.
37. The fluid of claim 1, wherein the phosphorus-containing antiwear component comprises an ester of phosphoric acid, an ester of phosphorous acid, or an amine salt thereof.
38. The fluid of claim 1, wherein the phosphorus-containing antiwear component comprises one or more of a dihydrocarbyl phosphite, a trihydrocarbyl phosphite, a dihydrocarbyl phosphate, a trihydrocarbyl phosphate, any sulfur analogs thereof, and any amine salts thereof.
39. The fluid of claim 1, wherein the phosphorus-containing antiwear component comprises one or more of a dibutyl hydrogen phosphite and an amine salt of a sulfurized dibutyl hydrogen phosphite.
40. The fluid of claim 1, wherein the fluid comprises from about 50 to about 500 parts per million by weight of phosphorus.
41. The fluid of claim 1, wherein the fluid comprises from about 150 to about 300 parts per million by weight of phosphorus.
42. The fluid of claim 1, wherein the fluid comprises about 0.1 wt% to about 0.4 wt% of the phosphorus-containing antiwear component.

43. The fluid of claim 42, wherein the fluid comprises about 0.2 wt% to about 0.3 wt% of the phosphorus-containing antiwear component.

44. The fluid of claim 1, further comprising one or more of an antioxidant, an extreme pressure additive, a corrosion inhibitor, an antiwear additive, a metal deactivator, an antifoam agent, a viscosity index improver, a pour point depressant, an air entrainment additive, a metallic detergent, and a seal swell agent.

45. The fluid of claim 1, wherein the fluid is suitable for use in a transmission employing one or more of a slipping torque converter, a lock-up torque converter, a starting clutch and one or more shifting clutches.

46. The fluid of claim 45, wherein the fluid is suitable for use in a belt, chain, or disk-type continuously variable transmission.

47. A method of improving friction durability comprising:

adding to a base oil an additive composition comprising

(a) a borated dispersant having at least one polyalkylene moiety having a molecular weight from about 900 to about 3000 amu, wherein the borated dispersant includes up to 1 wt% of boron;

(b) a friction-modifying amount of a succinimide, wherein the succinimide is prepared from an alkenyl succinic acid or anhydride and ammonia;

(c) a phosphorus-containing antiwear component comprising an organic ester of phosphoric acid, phosphorous acid, or an amine salt thereof.